

Remarks/Arguments

Claims 1, 11 21, 25, 37-39, 51-53 and 57-59 have been amended.

Claim 60 has been added.

Enclosed herewith is our check in the amount of \$250.00 in payment of the fee for added claim. Please charge any additional claim or other fees for entry of this Amendment to our Deposit Account No. 03-3415.

The Examiner has rejected applicants' claims 1-59 under 35 USC § 103(a) as being unpatentable based on the Black (US 6,307,956 B1) patent. With respect to applicants' claims, as amended, this rejection is respectfully traversed.

Applicants' independent claim 1 has been amended to recite as follows: A system for issuing an authentication certificate used in personal authentication comprising: reaction means for reacting a DNA array in which a plurality of DNA probes corresponding to plural kinds of genes are arranged in a predetermined order, with a gene obtained from a given person; and issuing means for issuing an authentication certificate for certifying the person by using a hybridization pattern formed on a reacted DNA array obtained by said reaction means. Independent claims 11, 21, 25, 37-39, 51-53 and 57-59 have been similarly amended.

Such constructions are not taught or suggested by the Black patent. More particularly, the Black patent teaches the use of a stylus with biometric properties for identity recognition and verification. The patent discusses using fingerprints as the biometric property. The patent also mentions at column 13, lines 45-48, the use of a "cell capture sensing method . . . such as DNA" in which the "cell capture occurs . . . and [is] compared against a reference cell for matching." The patent also mentions at column 24, line 67 through column 25, line 1, "cell

capture while the pen is being used” and in column 25, lines 3-35, discusses various techniques for DNA analysis including “[a]rrays of immobilized single-stranded DNA (ssDNA) probes, so-called DNA chips, . . . used for genetic analysis for disease detection, toxicology, forensics, industrial processing, and environmental monitoring.”

However, none of these teachings in the Black patent is a teaching or suggestion of realizing personal authentication by issuing an authentication certificate based on DNA. Moreover, none teach or suggest issuing an authentication certificate for certifying a person by using a hybridization pattern formed on a reacted DNA array obtained by reacting a DNA array in which a plurality of DNA probes corresponding to plural kinds of genes are arranged in a predetermined order, with a gene obtained from the given person.

To the contrary, the Black patent deals with user verification, not issuing an authentication certificate using DNA. Moreover, the match/no match system mentioned in the Black patent is also an “identity verification system” accomplished using pen or encrypted print as described in the patent at column 11, line 6, through column 12, line 44, which state, in part, as follows: “This is accomplished by (1) the user who owns and carries his/her own pen; (2) the user carrying the insert 50 on his/her user that includes an encrypted print, the insert 50 being compatible with the stylus 15 tethered to one of the terminals; (3) the user carries on his/her user a pen-based computer that is compatible with the computer network of the system; (4) the user carries on his/her user a credit/debit-type card that includes an encrypted print in either the magnetic strip or an IC element of a smart card; and (5) the user carries on his/her user a card that becomes a pen . . . the card-pen including an encrypted print in either the magnetic stripe or element of a smart card.”

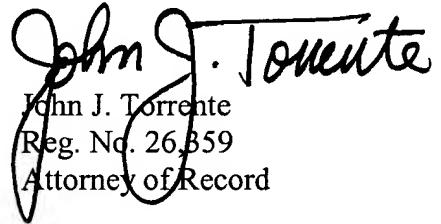
Applicants’ amended independent claims 1, 11-21, 25, 37-39, 51-53 and 57-59,

and their respective dependent claims, as well as applicants' newly added claim 60, in reciting in one form or another issuing an authentication certificate for certifying a person by using "a hybridization pattern formed on a reacted DNA array obtained by reacting a DNA array in which a plurality of DNA probes corresponding to plural kinds of genes are arranged in a predetermined order, with a gene obtained from the given person," thus patentably distinguish over the Black patent.

In view of the above, it is submitted that applicants' claims, as amended, patentably distinguish over the cited art of record. Accordingly, reconsideration of the claims is respectfully requested.

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Respectfully submitted,


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